Funding Requests from Agronomic Services and Research Stations

Presentation to the Joint Legislative Committee on Capital Improvements

December 13, 2018

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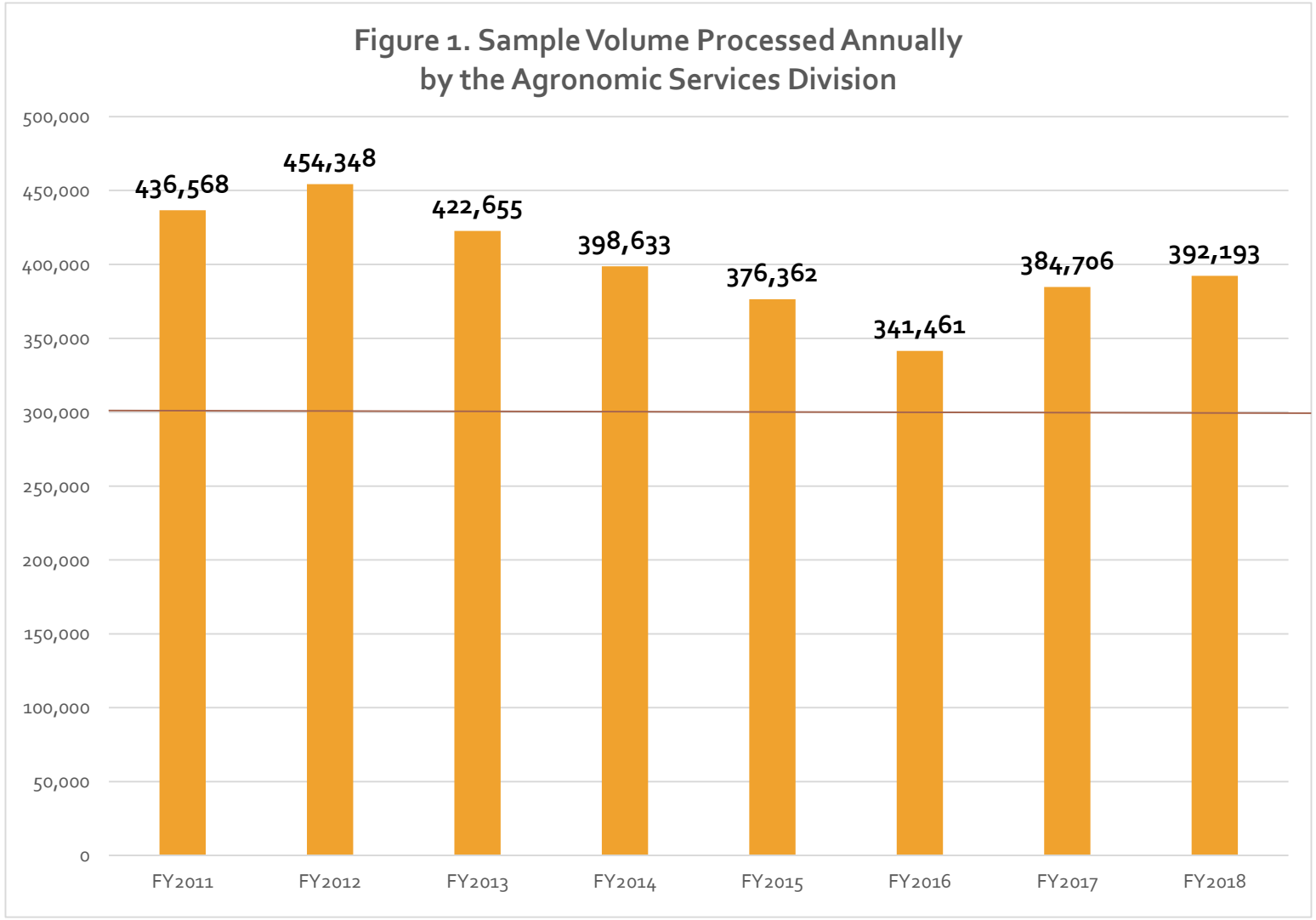
NCDA&CS

Agronomic Services

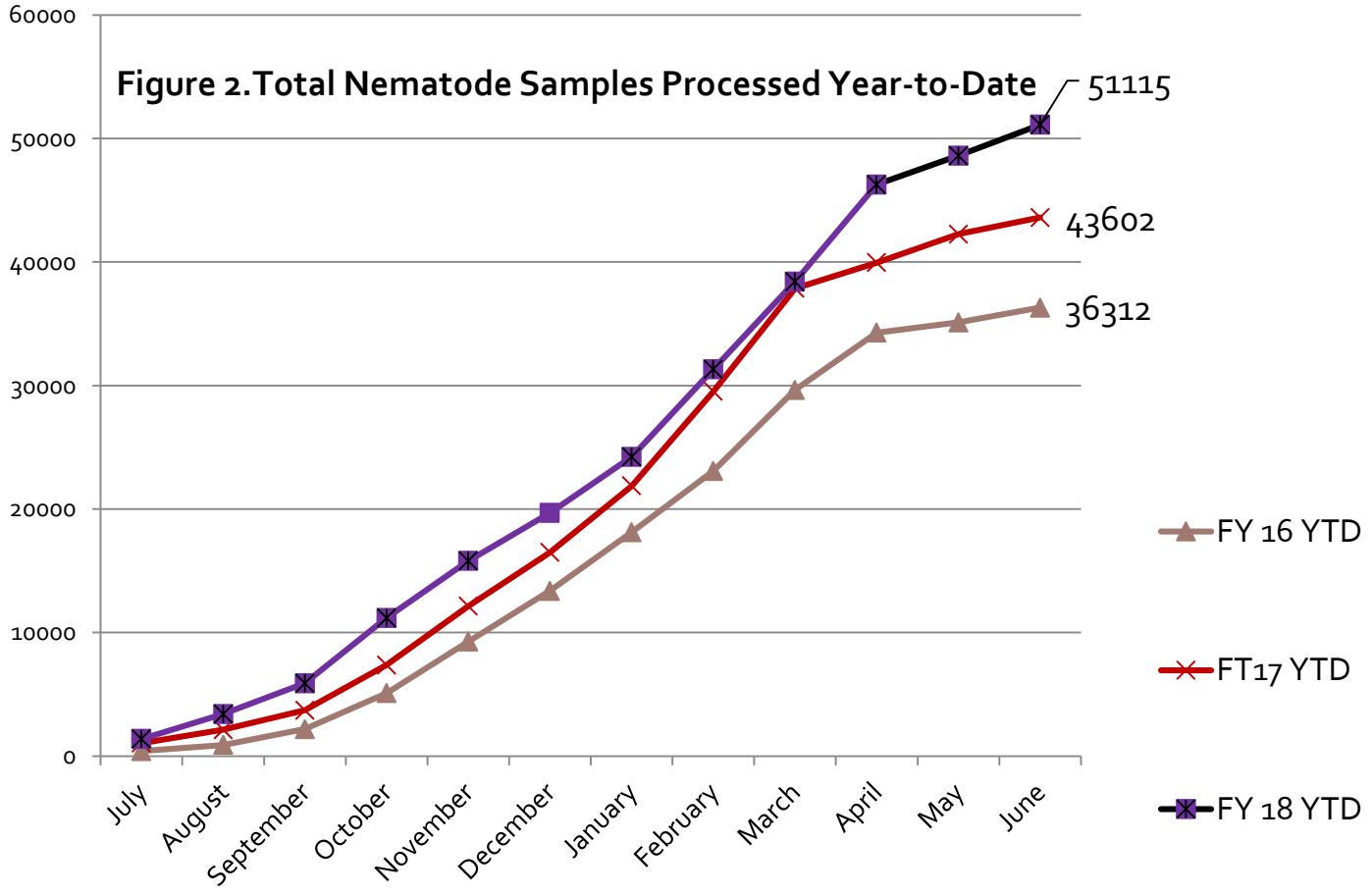
Donald W. Eaddy Building

- **Mission** -To provide all North Carolina residents with diagnostic and advisory services that increase agricultural productivity, promote responsible land management and safeguard environmental quality.
- **Laboratory Services Provided**
  - Soil testing for lime and fertilizer recommendations
  - Nematode assays to determine best control options for plant-parasitic round worms
  - Pinewood nematode assays to support the export of lumber products
  - Molecular diagnosis of nematode species to support regulatory programs
  - Analysis of plant tissue, solution and soilless media samples for nutrient content and management recommendations
  - Analysis of waste materials (hog lagoon, poultry litter, industrial wastes, etc.) to determine agronomic application rates and compliance with waste management regulations.

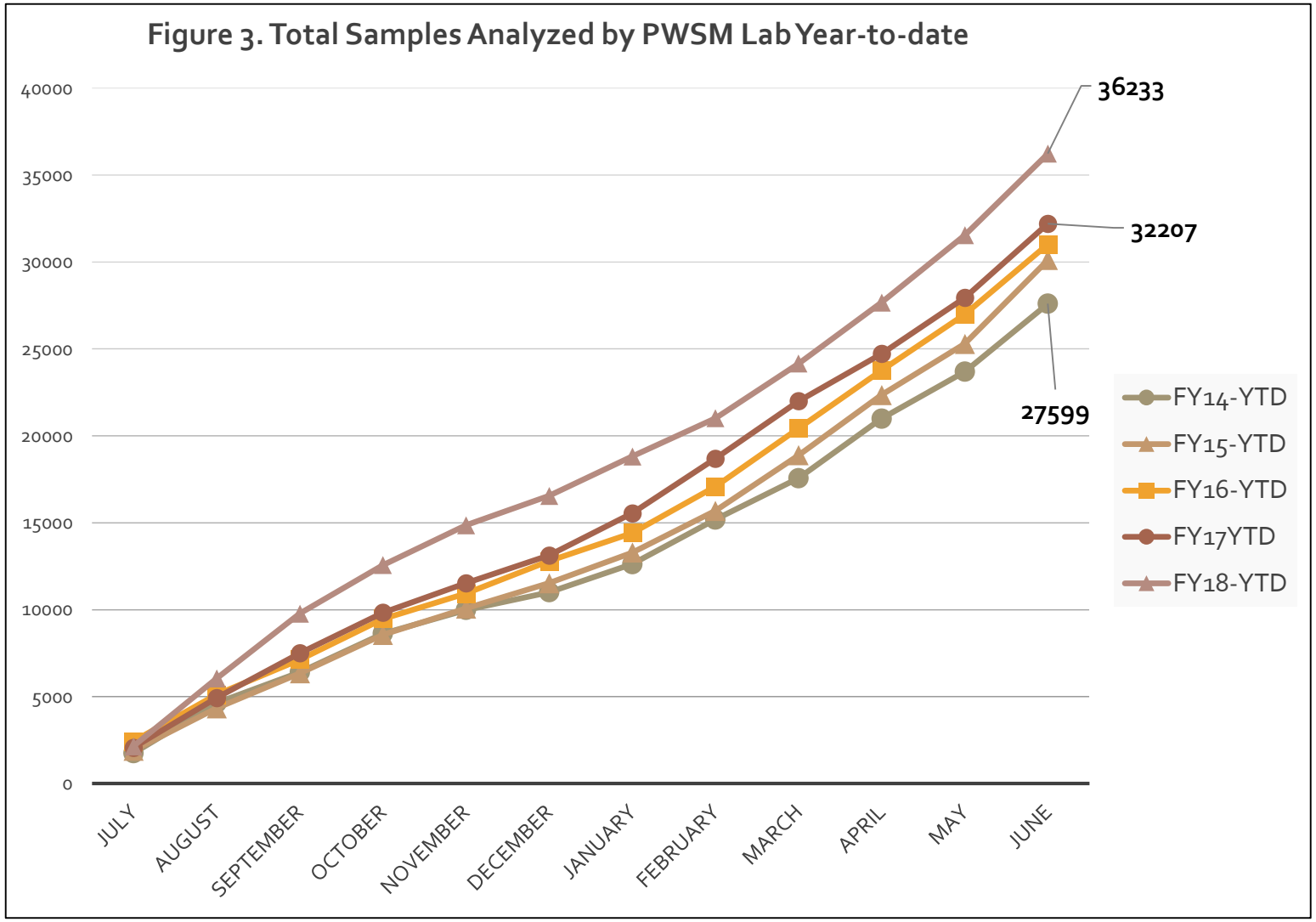
Justification for Expansion



Sample volume increases in the Nematode Assay Lab



Sample volume increases in the Plant/Waste/ Solution/ Media (PWSM) Lab



Current Challenges

1. Limited storage space for samples awaiting analysis
2. Thousands of samples stored in hallways, creating safety concerns
3. Crowded lab areas reduce productivity, efficiency and sample turnaround times
4. No available lab space for new, more efficient equipment
5. Molecular diagnostic procedures being performed in unheated closet off the loading dock

Samples Waiting Analysis

South Hallway

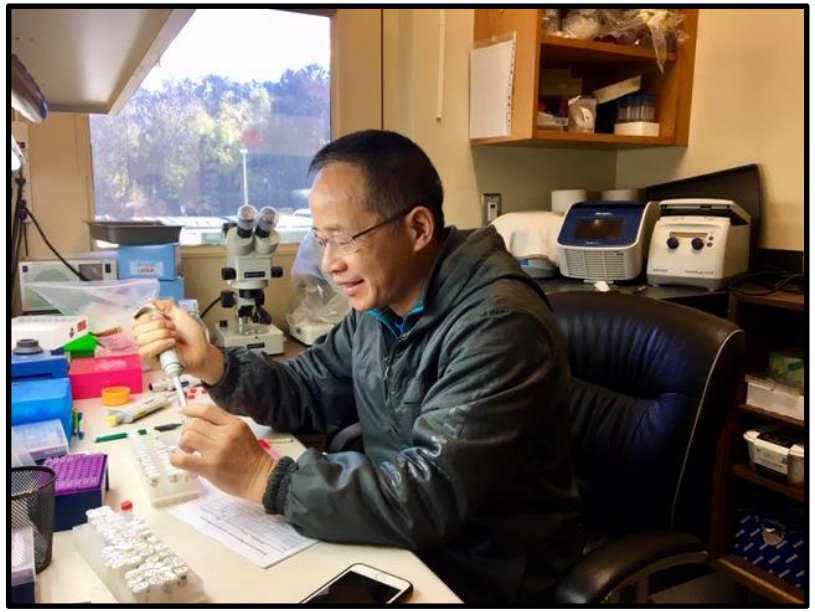
North Hallway

Samples Waiting Analysis

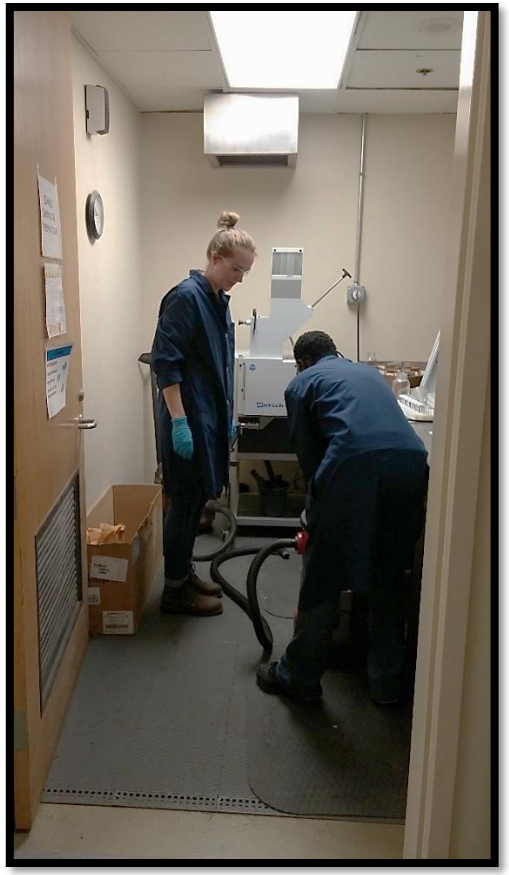
Samples in Bulk Storage Room

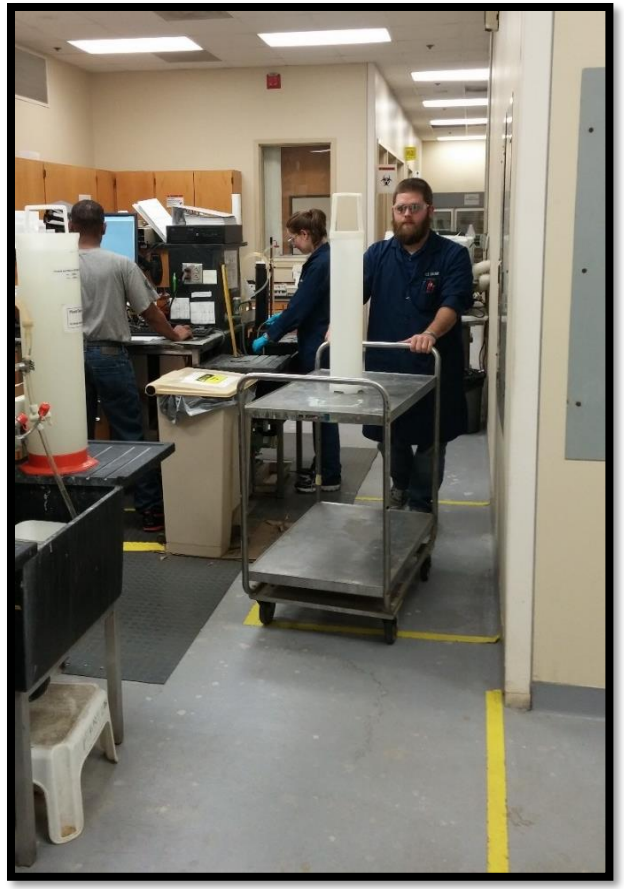
Samples in Nematode Receiving Room

Inadequate Laboratory Space



Closet used for nematode molecular diagnostic procedures





Sample grinding (L) and analytical (R) areas for plant and waste samples

Proposed Agronomic Services Project – Total Estimated Cost, $853,00

- Construction of new detached, climate-controlled building (60 ft X 100 ft) for sample receiving and storage
- Relocation all receiving activities to this new building
- Renovation of current bulk storage room to expand the PWSM and Nematode Assay Labs
- Construction of a "clean room" for molecular diagnostic procedures

Research
Stations Division

Swine Research Facility Replacement

Research Stations Division

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Goodness Grows in NC

Our Mission

- To manage crop and livestock facilities that serve as a platform for agriculture research to make farming more efficient, productive and profitable, while maintaining a sound environment and providing consumers with safe and affordable products.

NORTH CAROLINA RESEARCH STATIONS

** Items in bold are reasearch interests*

BORDER BELT: Field Crops (**Tobacco**, Soybeans, Corn, Peanuts, Small Grains)

CASWELL FARM: Field Crops (**Soybeans**, **Corn**, Wheat), **Organic Crops** (Soybeans and Cotton), Invasive Weed Ecology, Native Grasses

CENTRAL CROPS: Field Crops (**Corn**, Soybeans, **Cotton**, Small Grains), Tobacco, Swine, Horticultural Crops (Melons, Peaches, Apples, **Strawberries**, Sweet Potatos, Squash), Canola

CHERRY FARM: **Grass-based Dairy**, Beef, **Antibiotic-free Swine**, Corn, Soybeans, Cotton, **Specialty Crops**, Organic Farming, Goats, Wetlands Restoration, Waste Composting, Riparian Buffers

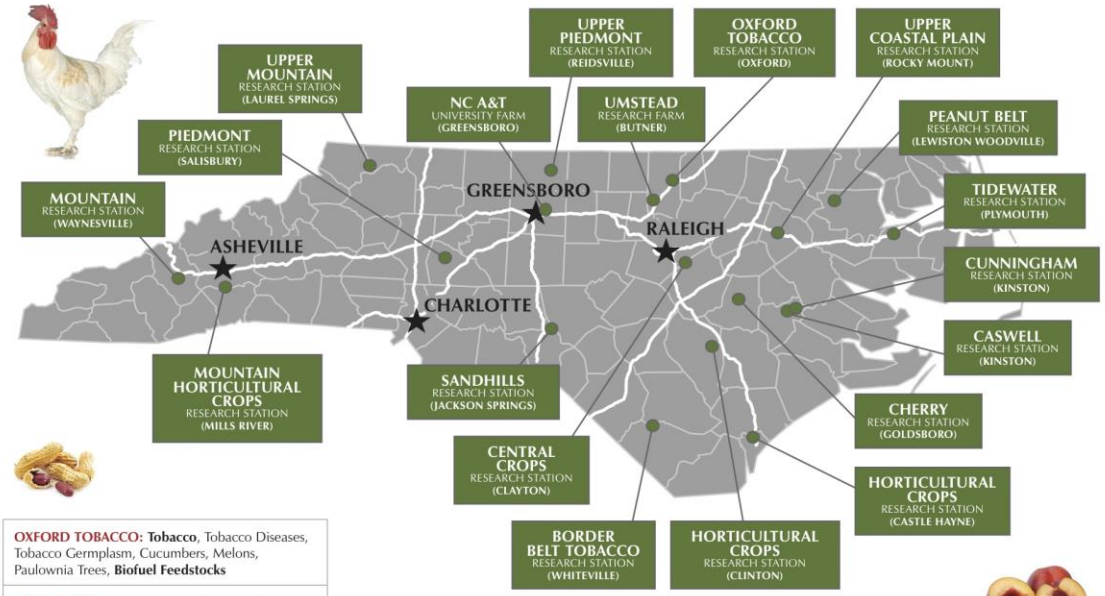
CUNNINGHAM/LOWER COASTAL: Tobacco (**Flue-cured**, Burley, and Dark Air-Cured), Horticultural Crops (Brambles, **Melons**, Watermelons, **Sweetpotatoes**, Lettuce, Cabbage, Squash, Cucumbers), Corn

HORTICULTURAL CROPS, CLINTON: Horticultural Crops (**Cucumbers**, Melons, **Sweetpotatoes**, **Peppers**, Blueberries, Grapes, Strawberries, Watermelon, Tomatoes), Field Crops (Soybeans, Corn)

HORTICULTURAL CROPS, CASTLE HAYNE: **Blueberries,** Strawberries, Grapes, Cucumbers, Watermelon, Woody Ornamentals, Woody Fruit Species, **Sea Oats**, **Coastal Beach Grass**

MOUNTAIN: Specialty Crops, Christmas Trees, **Heirloom Tomatoes**, Forages, Beef, Wheat, Corn, **Burley Tobacco**, Alternative Crops

MOUNTAIN HORT: **Tomatoes**, Ornamentals, Apples, Peaches, Strawberries, Blueberries, Brambles, Peppers, Cucurbits, Soybeans, Corn, **Aquaculture**, **Greenhouse Production**



OXFORD TOBACCO: **Tobacco**, Tobacco Diseases, Tobacco Germplasm, Cucumbers, Melons, Paulownia Trees, **Biofuel Feedstocks**

PEANUT BELT: **Peanuts**, **Corn**, Cotton, Wheat, Soybeans, Cucumbers, Melons, Snapbeans, Sorghum, Sage, Fescue

PIEDMONT: **Poultry**, **Dairy**, Corn, Soybeans, Hay, **Small Grains**, Wheat, Tomatoes, Strawberries, Caneberries, Blueberries, **High Tunnel Production**

SANDHILLS: **Peaches**, Blueberries, **Turfgrass**, Corn, Soybeans, Caneberries, Peppers, Strawberries, Ornamentals, Peanuts, Sweetpotatos, Cotton, Rye

TIDEWATER: Soybeans, Corns, Cotton, Aquaculture, **Swine**, **Beef**, **Irish Potatoes**, Rice, Canola, Sweet Sorghrum, Small Grains

UMSTEAD: **Forestry**, **Water Quality**, Bio-fuel Feedstocks, Weed Management, **Forage Production**

UPPER COASTAL PLAIN: Peanuts, Cotton, Soybeans, Corn, **Tobacco**, Cucurbits, Small Grains, Switchgrass, Trees, **Weed Management**

UPPER MOUNTAIN: **Beef**, Goats, Christmas Trees, Strawberries, **Brambles** (Raspberries, Blackberries), Blueberries, **Burley Tobacco**, Small Grains, Mushrooms, Organic Crops, Ornamentals

UPPER PIEDMONT: Grapes, **Beef**, **Flue-cured**, **Burley** & **Dark Tobacco**, Paulownia Trees, Wheat, Canola, Biofuels, Turf, **Meat Goats**

A&T UNIVERSITY FARM: Swine, Poultry, **Specialty Crops**, Organic Crops, Goats, **Waste Management**, **Constructed Wetlands**, Soil Quality

Swine Industry in North Carolina

got to be NC AG RESEARCH
Goodness Grows in NC

- Employees 46,000 people
- Over $2.3 Billion in cash receipts
- NC Ranks 2nd in the nation in hog production

NCDA Swine Research facilities

- Tidewater Research Station in Plymouth, NC is home to one of the largest swine research facilities in the nation
- Farrow to finish research program
- Research topics include genetics, feed conversion, animal health, animal behavior and micro nutrient supplementation

NCDA Swine Research facilities

- Discoveries made at the facility have, and will continue to improve production practices for the swine industry in North Carolina
- Provides critical training platform for graduate students

NCDA Swine Research facilities

- Current facility dates back to the 1960's
- Due to age, heavy use and changes in production technology, the facility is in need of replacement

Proposed Swine Research Facility Replacement

Construct new farrow to finish research facility at Tidewater Research Station

- Project will include:
  - Animal houses, working facilities, office, waste management
  - Office and lab space
  - Latent environmental, feed and water controls,
  - Feed storage and processing
  - Demolition and cleanup of old facility

Estimated Cost: $3 Million

Questions?